

AMENDMENTS TO THE CLAIMS:

1 - 9 (Cancelled).

10. (New) An interrogation apparatus for communicating with at least one transponder, comprising:

at least one antenna portion operable to transmit an interrogation signal to the transponder and to receive a data signal from the transponder;

5 a processing portion operably interconnected to said at least one antenna portion operable to receive the data signal, determine the presence or absence of body characteristic data within the data signal, and when the presence of body characteristic information is detected, decode the data signal to obtain at least said body characteristic information; and

10 an output portion operable to output, when the presence of body characteristic information is detected, said body characteristic information.

11. (New) The interrogation apparatus of Claim 10, wherein said processing portion is further operable to determine the presence or absence of identification information within the data signal, and when the presence of identification information is detected, decode the data signal to obtain said identification information; and

5 wherein said output portion is further operable to output said identification information when the presence of identification information is detected.

12. (New) The interrogation apparatus of Claim 10, wherein said processing portion is operable to detect at least two different formats of data within said data signal and is operable to detect the presence or absence of body characteristic information within each format of data.

13. (New) The interrogation apparatus of Claim 12, wherein said body characteristic is temperature.

14. (New) The interrogation apparatus of Claim 10, wherein said processing portion is further operable to determine a data format of said data signal.

15. (New) The interrogation apparatus of Claim 14, wherein said data format conforms to an existing standard for transmission of identification information from a transponder to an interrogator.

16. (New) The interrogation apparatus of Claim 15, wherein said data format conforms to ISO standard 11785.

17. (New) The interrogation apparatus of Claim 14, wherein said data format is FDXA.

18. (New) The interrogation apparatus of Claim 14, wherein said data format is FDXB.

19. (New) The interrogation apparatus of Claim 10, wherein said output portion includes a display.

20. (New) The interrogation apparatus of Claim 10, wherein said output portion includes a connection to a storage medium.

21. (New) The interrogation apparatus of claim 10, wherein said output portion includes a data communication link operable to transmit data received from a transponder to a device external to said interrogation apparatus.

22. (New) The interrogation apparatus of Claim 10, further comprising:  
an input portion operable to receive an input signal,

wherein said processing portion is operable to generate said interrogation signal in response to said input signal.

23. (New) The interrogation apparatus of Claim 22, wherein said input portion includes an actuator activated by a user to generate said input signal.

24. (New) The interrogation apparatus of Claim 22, wherein said input portion includes a connection to an external device which provides a signal to generate said interrogation signal.

25. (New) The interrogation apparatus of Claim 10, wherein said data signal includes a telegram having at least a header and a data portion, and wherein said processing portion is operable to receive said header and determine from said header whether said data portion includes body characteristic data.

26. (New) The interrogation apparatus of Claim 25, wherein said data portion includes an identification code and a trailer wherein, when said data portion includes body characteristic data, said body characteristic data is included in said trailer.

27. (New) The interrogation apparatus of Claim 10, wherein said data signal includes a cyclical transmission of a data telegram which includes body characteristic information.

28. (New) The interrogation apparatus of Claim 27, wherein said body characteristic information is included in a trailer portion of said data telegram.

29. (New) The interrogation apparatus of Claim 10, wherein said data signal includes a cyclical transmission of an identification telegram which includes identification information and a body characteristic telegram which includes body characteristic information.

30. (New) The interrogation apparatus of Claim 29, wherein said cyclical transmission includes three identification telegrams and one body characteristic telegram.

31. (New) The interrogation apparatus of Claim 29, wherein said identification telegram conforms to an existing standard for transmission of identification information from a transponder to an interrogator.

32. (New) The interrogation apparatus of Claim 31, wherein said identification telegram conforms to ISO standard 11785 data format.

33. (New) The interrogation apparatus of Claim 32, wherein said data format is FDXA.

34. (New) The interrogation apparatus of Claim 10, wherein said at least one antenna portion includes a single antenna operable to transmit the interrogation and receive the data signal.

35. (New) The interrogation apparatus of Claim 10, wherein said at least one antenna portion includes at least one send antenna operable to transmit the interrogation signal and at least one receive antenna operable to receive the data signal.

36. (New) The interrogation apparatus of claim 10, wherein said processing portion includes a processor and a memory interconnected to said processor.

37. (New) The interrogation apparatus of claim 36, wherein said memory is operable to store information for multiple transponders.

38. (New) The interrogation apparatus of claim 10, wherein said processing portion is operable to receive said data signal, demodulate said data signal into an information signal, and determine the contents of the information signal.

39. (New) The interrogation apparatus of claim 38, wherein said processing portion is operable to identify a indicator within said information signal, and determine the presence of body characteristic information based on the indicator.

40. (New) The interrogation apparatus of claim 39, wherein said indicator is included in a header.

41. (New) The interrogation apparatus of claim 39, wherein said information signal contains a plurality of indicators, and said processing portion is operable to determine the presence of body characteristic information based on any detected differences between one or more of the plurality of indicators.

42. (New) The interrogation apparatus of claim 41, wherein said processing portion is operable to obtain and store a predetermined number of indicators and other information from said information signal, and determine the presence or absence of body characteristic information.

43. (New) A system for identifying an object and a body characteristic associated therewith, comprising:

an interrogator operable to transmit an interrogation signal; and

5 a transponder operable to receive said interrogation signal and generate a data signal, said data signal including at least one of identification information and body characteristic information associated with the object, wherein:

10 said interrogator is further operable to receive said data signal and determine the presence or absence of said body characteristic information within said data signal, determine the presence or absence of identification information within said data signal, and output at least one of said identification information and body characteristic information.

44. (New) The system as claimed in Claim 43, wherein said interrogator is further operable to detect at least two formats of data within said data signal.

45. (New) The system as claimed in Claim 44, wherein said at least two formats of data conform to ISO standard 11785.

46. (New) The system as claimed in Claim 44, wherein said at least two formats of data include FDXA and FDXB.

47. (New) The system as claimed in Claim 43, wherein said interrogator further includes a display operable to output at least one of said identification information and body characteristic information.

48. (New) The system as claimed in Claim 43, wherein said interrogator further includes a data communication link operable to communicate data received from said transponder to a device external to said interrogator.

49. (New) The system as claimed in Claim 43, wherein said interrogator further includes an input portion operable to receive an input signal, wherein said interrogation signal is generated in response to said input signal.

50. (New) The system as claimed in Claim 49, wherein said input portion includes a connection to an external device which provides a signal to generate said interrogation signal.

51. (New) The system as claimed in Claim 49, wherein said input portion includes an actuator activated by a user to generate said input signal.

52. (New) The system as claimed in Claim 43, wherein said data signal includes a telegram having an indicator, and wherein said processing portion is operable to receive said telegram and determine from said indicator whether said telegram includes body characteristic data.

53. (New) The system as claimed in Claim 52, wherein said telegram includes an identification code and a trailer wherein, when said telegram includes body characteristic data, said body characteristic data is included in said trailer.

54. (New) The system as claimed in Claim 43, wherein said transponder includes an integrated sensor operable to detect said body characteristic information.

55. (New) The system as claimed in Claim 54, wherein said integrated sensor is operable to detect temperature information.

56. (New) The system as claimed in Claim 43, wherein said data signal includes identification and body characteristic data.

57. (New) The system as claimed in Claim 56, wherein said body characteristic is temperature.

58. (New) The system as claimed in Claim 56, wherein said interrogator outputs only body characteristic information.



59. (New) A method for identifying an object and a characteristic associated therewith, comprising the steps of:

transmitting an interrogation signal from an interrogator;

receiving said interrogation signal at a transponder;

5 transmitting an encoded data signal including at least one of identification information and characteristic information from said transponder to said interrogator;

receiving said encoded data signal at said interrogator;

decoding said data signal to determine the presence or absence of said identification information and the presence or absence of said characteristic information;

10 and

outputting at least one of said identification information and characteristic information.

60. (New) The method of Claim 59, wherein said transmitting an interrogation signal step includes:

receiving an input signal at said interrogator; and

generating said interrogation signal in response to said input signal.

61. (New) The method of Claim 60, wherein said input signal is generated by a user.

62. (New) The method of Claim 60, wherein said input signal is generated in response to a signal received at said interrogator from an external controller.

63. (New) The method of Claim 59, wherein said transmitting an encoded data signal step includes:

determining said characteristic at said transponder;

5           formatting a telegram having a header and a data portion, wherein said data portion includes identification information associated with said transponder and said characteristic information.

64. (New) The system as claimed in Claim 63, wherein said data portion includes said identification information and a trailer containing said characteristic information.

65. (New) The method of Claim 59, wherein said transmitting an encoded data signal step includes:

          formatting a first telegram having a first data portion, wherein said first data portion includes identification information associated with said transponder.

66. (New) The method of Claim 65, wherein said transmitting an encoded data signal step further includes:

          determining said characteristic at said transponder;

5           formatting a second telegram having an indicator and a second data portion, wherein said second data portion includes said characteristic information.

67. (New) The method of Claim 66, wherein said decoding said data signal step includes:

          demodulating said encoded data signal to obtain said telegram; and

5           determining from the presence of said indicator whether said data portion includes characteristic data.

68. (New) The method of Claim 59, wherein said decoding said data signal step includes:

          demodulating said encoded data signal to obtain a telegram having a header and a data portion; and

5                   determining from said header whether said data portion includes characteristic data.

69. (New) The method of Claim 68, wherein said decoding said data signal step includes:

demodulating said encoded data signal to obtain a predetermined number of telegrams, each telegram having a header and a data portion; and

5                   determining from said header whether said data portion associated with the telegram includes characteristic data.

70. (New) The method of Claim 69 wherein said data portion includes an identification code and a trailer wherein, when said data portion includes characteristic data, said characteristic data is included in said trailer.

71. (New) The method of Claim 69 wherein said data portion of at least one of said telegrams includes characteristic data and the data portion of the remaining telegrams includes identification information.

72. (New) The method of Claim 59, wherein said outputting step includes displaying at least one of said identification information and said characteristic information on a display associated with said transponder.

73. (New) The method of Claim 59, wherein said outputting step includes storing at least one of said identification information and said characteristic information to a storage medium.

74. (New) The method of Claim 59, wherein said outputting step includes communicating at least one of said identification information and said characteristic information to a device external to said interrogation apparatus.

75. (New) A method for interrogating a transponder, comprising:  
transmitting an interrogation signal;  
detecting a response signal generated from the transponder in response to said  
interrogation signal;  
5 determining a format of said response signal;  
decoding identification information encoded within said response signal;  
determining if body characteristic data is included in said response signal; and  
when body characteristic data is included in said response signal, decoding said  
characteristic data.

76. (New) The method for interrogating a transponder as claimed in Claim 75,  
wherein said determining a format step includes demodulating said response signal and  
comparing a format of said demodulated signal to at least two predetermined formats of  
data.

77. (New) The method for interrogating a transponder as claimed in Claim 76,  
wherein said at least two predetermined formats of data conform to ISO standard 11785.

78. (New) The method for interrogating a transponder as claimed in Claim 76,  
wherein said at least two formats of data include FDXA and FDXB.

79. (New) The method for interrogating a transponder as claimed in Claim 75,  
wherein said decoding identification information step includes:  
storing at least one data telegram from said response signal; and  
obtaining said identification information from said telegram based on the format  
5 of said response signal.

80. (New) The method for interrogating a transponder as claimed in Claim  
79, wherein said obtaining said identification information step further includes:

identifying a header within said data telegram;  
identifying a data portion within said data telegram; and  
5 obtaining said identification information from said data portion.

81. (New) The method for interrogating a transponder as claimed in Claim 75, wherein said determining if body characteristic data is included in said response signal step includes:

storing at least one data telegram from said response signal; and  
5 determining the presence of body characteristic information based on information within said data telegram.

82. (New) The method for interrogating a transponder as claimed in Claim 81, wherein said determining the presence of body characteristic information step includes:

identifying a header within said data telegram;  
identifying a data portion within said data telegram; and  
5 determining the presence or absence of body characteristic information within said telegram based on said header.

83. (New) The method for interrogating a transponder as claimed in Claim 81, wherein said determining the presence of body characteristic information step includes:

comparing headers from a plurality of data telegrams; and  
determining the presence or absence of body characteristic information within  
5 said telegrams based on differences detected between said headers.

84. (New) A method for identifying an object and a characteristic associated therewith, comprising the steps of:

transmitting an interrogation signal from an interrogator;

receiving said interrogation signal at a transponder;

5 transmitting an encoded data signal including at least one of identification information and characteristic information from said transponder to said interrogator;

receiving said encoded data signal at said interrogator;

decoding said data signal to determine the presence or absence of said identification information and the presence or absence of said characteristic information;

10 and

outputting said characteristic information.

85. (New) The method of Claim 84, wherein said transmitting an interrogation signal step includes:

receiving an input signal at said interrogator; and

generating said interrogation signal in response to said input signal.

86. (New) The method of Claim 85, wherein said input signal is generated in response to a signal received at said interrogator from an external controller.

87. (New) The method of Claim 84, wherein said transmitting an encoded data signal step includes:

determining said body characteristic at said transponder;

5 formatting a telegram having a header and a data portion, wherein said data portion includes identification information associated with said transponder and said body characteristic information.

88. (New) The method of Claim 59, wherein said transmitting an encoded data signal step further includes:  
determining said body characteristic at said transponder;  
formatting a telegram having an indicator and a data portion, wherein said second  
5 data portion includes said body characteristic information.

89. (New) The method of Claim 88, wherein said decoding said data signal step includes:  
demodulating said encoded data signal to obtain said telegram; and  
determining from the presence of said indicator whether said data portion  
5 includes body characteristic data.

90. (New) The method of Claim 89 wherein said data portion includes an identification code and a trailer wherein, when said data portion includes body characteristic data, said body characteristic data is included in said trailer.

91. (New) The method of Claim 84, wherein said outputting step includes displaying said body characteristic information on a display associated with said transponder.

92. (New) The method of Claim 91, wherein said display is a monitor which displays body characteristic information.

93. (New) The method of Claim 84, wherein said outputting step includes:  
displaying said body characteristic information;  
comparing a value of said body characteristic information to a predetermined  
range of values; and  
5 generating an alarm when said value is not within said predetermined range of values.

94. (New) The method of Claim 84, wherein said outputting step includes storing said body characteristic information to a storage medium.

95. (New) An interrogation apparatus for communicating with a transponder, comprising:

at least one antenna operable to transmit an interrogation signal to the transponder and to receive a data signal from the transponder;

5 a processing portion operably interconnected to said at least one antenna operable to receive the data signal, decode the data signal to obtain identification information contained therein, and when the data signal includes an indicator, to further decode the data signal to obtain body characteristic information contained therein; and

10 an output portion operable to output said identification information and, when said indicator is detected, output said body characteristic information.

96. (New) The interrogation apparatus of Claim 95, wherein said output portion outputs only body characteristic information.

97. (New) The interrogation apparatus of Claim 95, wherein said body characteristic is temperature.

98. (New) The interrogation apparatus of Claim 95, wherein said processing portion is operable to detect at least two different formats of data within said data signal and is operable to detect the presence or absence of body characteristic information within each format of data.

99. (New) The interrogation apparatus of Claim 98, wherein said data formats conform to an existing standard for transmission of identification information from a transponder to an interrogator.



100. (New) The interrogation apparatus of Claim 98, wherein said data formats conform to ISO standard 11785.

101. (New) The interrogation apparatus of Claim 100, wherein said data format is FDXA.

102. (New) The interrogation apparatus of Claim 100, wherein said data format is FDXB.